## **Exhibit D**

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# Wholesale Counterparty Credit Risk Credit Review – Hedge Funds Incremental Request

Investment Manager | Archegos Capital Management, LLC

Fund(s) Name Archegos Fund, LP

Risk Manager	Risk Officer	Analyst	Report Date
Ben Maisel	Alex Klag	-	October 2018

WCIS ID	Counterparty / Fund Name	Fund	BQR	CQR	Credit	Legal
		Type			Tier	Documentation
244162348	Archegos Fund LP	HF	52	1	2	PBCA

## **PURPOSE & REQUEST / RELATIONSHIP**

Purpose – This is an incremental credit memo prepared for Archegos Capital Management, LLC ('the Firm' or 'Archegos'), a New York based investment management company responsible for managing the assets of Bill Hwang and his family. Bill holds materially all of his net worth within Archegos Fund LP, which at the end of August, totaled \$5.1 Billion in assets. Archegos has been operating as a going concern since 2013 and has 40 employees.

Before re-organizing as a family office, Archegos Capital Management, LLC, was formerly known as Tiger Asia Management, LLC. Tiger Asia Management, LLC (a Tiger Cub and Asia-focused equity hedge fund) operated from 2001 to 2012.

Request – Archegos Fund LP was initially approved in PB for up to \$1.5Bn in debit balances (subsequently increased to \$2Bn). The initial approval was given with the understanding that the size and scope of the relationship would grow over time, as both firms developed a trading history. This is an overnight PB relationship with all balances cleared on the broker-dealer (WFSLLC).

• New Request – Prime Brokerage Sales is requesting an additional increase to the client's debit balance capacity. The request is for \$3Bn in total financing balances, up from \$2Bn, which was approved in August 2018.

Note – Attached at the end of this memo is the initial credit review for Archegos from August 2018. Please see the full credit review for more background on the manager, trading strategy, leverage, liquidity, risk management, and BQR rating rationale for the fund.

**Relationship** – Archegos maintains multiple touch-points within Wells Fargo. The Prime Brokerage relationship is covered by Patrick Travers and Michael Collins. Archegos has also maintained a long-term custodial relationship with the Wells Fargo IRT Team, covered by Denise Zapzalka. Judith Barry covers the customer from a GICG perspective.

Off the back of the PB relationship, members of the Archegos team have been introduced to the Wells Fargo equity trading desk. Going forward, the expectation is that the PB and equity trading relationships will continue to grow. In addition, there is the potential for future equity business done via swap. To that end, WCCR is in the early stages of negotiating an ISDA/CSA with the customer.

**WCCR Relationship** – Archegos has remained extremely open and transparent with WCCR throughout the early stages of the PB relationship. This includes three separate meetings with multiple personnel at Archegos, all since May of this year.

WCCR conducted an initial credit due diligence at the Archegos Offices in May 2018. WCCR (Ben Maisel and Alex Klag) met with Patrick Halligan (CFO) and Scott Becker (Finance and Ops). Patrick and Scott were able to speak to the firm history, as well as the fund's investment strategy, leverage, liquidity, risk management and compliance processes.

A follow-up meeting was also conducted in July 2018. Founder and CIO, Bill Hwang, Chairman and President, Andy Mills and Head Trader, William Tomita were in attendance from the Archegos side. Ben Maisel, Mike Riley, Eamon McCooey, Judith Barry and Patrick Travers were in attendance from Wells Fargo. In the meeting, Archegos outlined the extensive steps that have been made to build out and maintain an institutional compliance framework. This is in response to regulatory and compliance issues that impacted the prior firm, Tiger Asia Management (See: Firm Background for more details).

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Fund(s) Name	Archegos Fund, LP	

A tertiary meeting was conducted in October 2018. Greg Gruber, Alex Klag, Judith Barry and Mike Collins met with Head Trader, William Tomita. The meeting was set-up with the intention of building further connectivity between members of WCCR and the team at Archegos. During the meeting, Archegos discussed the scope of future PB and equity swap activity with Wells Fargo.

## **RECOMMENDATION & LIMITS**

WCCR is supportive of the request for an additional \$1Bn in debit capacity with Archegos Fund, LP, <u>bringing the fund's</u> total debit limits to \$3Bn. This recommendation is supported by the following:

## **Key Supporting Factors:**

- Strong Documentation Terms This is an <u>Overnight Prime Brokerage Relationship</u>, which provides Wells Fargo with full discretion to recall loans, raise pricing or raise margin at any time.
- Straight Forward Investment Strategy Archegos implements a fundamental-research based, long-short equity strategy that focuses on mega cap stocks. The manager's long-term investment horizon (3-5 years), provides stability to the investment portfolio and turnover is extremely limited.
- **Liquid Investment Portfolio** PB is lending against a portfolio of liquid, large-cap, US based equity securities and ADRs of large, Asia based equity issuers. Note, this is a long-only portfolio.
- Sticky & Sizable Capital Base Archegos invests exclusively on behalf of Mr. Hwang and his family, with assets that exceed \$5Bn. This is permanent source of capital that is not subject to redemption pressure. Distributions for taxes and/or charity can be planned for well in advance.
- Transparency Archegos has been extremely forthcoming and welcoming in the early stages of the PB relationship. WCCR has conducted several in-person meetings with the manager. In addition, Tim Sloan is set to meet with Archegos Management in December 2018.
- Diversification Amongst Prime Brokers Archegos maintains financing balances across six prime brokers, three US based providers (Morgan Stanley, Jeffries and Wells Fargo), two European based providers (Credit Suisse and Deutsche Bank) and one Asian based provider (Nomura). MS and CS hold the largest portfolios; however, Archegos intends to hold meaningful balances at all of its providers.

WCCR acknowledges the below risk factors associated with the customer. Key risk factors were considered and vetted, ahead of providing support for the initial and now subsequent financing request.

## **Key Risk Factors:**

- Franchise Risk Prior to re-organizing as a family office in 2013, Founder, Bill Hwang were charged by the SEC for insider trading. The firm, Tiger Asia Management was also charged with one count of wired fraud. All charges were settled. Bill was prohibited from managing external capital for 5 years. Bill did not have to admit nor deny the charges. Bill was also banned from trading in Hong Kong for 4 years.
  - Mitigant Archegos has made substantial improvements to its compliance procedures and personnel. A 30 year corporate veteran, Andy Mills, was hired in 2014 to ensure that Archegos maintained best in class processes and procedures as it relates to regulatory compliance.
  - <u>Mitigant</u> Archegos has been cleared by the Head of Financial Crimes at WFS and will be subject to enhanced compliance monitoring at WFS.
  - <u>Mitigant</u> Archegos has spent a considerable amount of time with several members of WCCR and Prime/Equity Business Management in their efforts to ensure that WFS understands the organization and is comfortable as a business partner.

WELLS SECURITIES	Wholesale Counterparty Credit Risk Credit Review – Hedge Funds Incremental Request	
Investment Manager	Archegos Capital Management, LLC	
Fund(s) Name	Archegos Fund, LP	

- Directional Portfolio Archegos holds a directional, long-only portfolio of securities in its PB portfolio at WFS.
   Given its directionality, the portfolio at WFS remains vulnerable to a decline across developed equity markets, particularly in technology and FAANG stocks. Note, Archegos obtains the majority of its short exposure through swaps at other providers.
  - Mitigant In addition to the excess collateral at its prime brokers, Archegos holds \$1Bn in cash and cash
    equivalents at a third party custodian. The cash reserve can be used to meet margin calls. The portfolio is
    also very liquid, which provides them with the ability/option to liquidate to meet calls, when required.

## **EXPOSURE & RELATIONSHIP SUMMARY**

**Relationship Summary** – Archegos is a new PB client that began clearing in September 2018. The fund's PB activity is cleared on the broker-dealer (WFSLLC) under the PM margin regime. This margin methodology allows for a maximum of 6-7x in gross leverage (minimum margin requirement of 15%).

On September 6<sup>th</sup>, 2018, Archegos transferred over ~\$970M of equity securities, resulting ~\$800M in debits. This was followed by a second transfer on September 10<sup>th</sup>, 2018. The second transfer included an additional ~\$950M of equity securities and resulted in an additional ~\$966M in debits. A large percentage of the balances were transferred over from Deutsche Bank.

Following the two transfers, Archegos became one of the largest PB clients by debit balances, totaling \$1.8Bn, as of October 3<sup>rd</sup>, 2018. The portfolio has remained largely static since the initial transfers.

**Exposure** – Archegos is currently clearing a portfolio of liquid, large cap US equity securities and ADRs of large, Asia based equity issuers. This is a long only portfolio (the manager does the large majority of its short business on swap, at other providers) and includes 24 positions. The portfolio is heavily invested in the tech and internet sectors and includes many of the FANG + BAT constituents. Archegos has been invested in its largest positions for several years.

At present, the portfolio carries a long market value of \$2.2Bn. PB Equity totals \$425M. The fund also holds excess collateral equal to \$82M at WFS. Since the initial transfer, Archegos has maintained excess collateral between \$70M and \$90M at WFS.

The portfolio currently includes a margin requirement of \$342M. The requirement is largely driven by PB Risk's base calculation, with a smaller amount driven by a sector add-on. The weighted average portfolio requirement totals 15.3%.

Currently, there is no PFE on this portfolio. The PB margin requirement provides over 2x coverage of the PEAC precollateral stress (\$152M). In addition, the PB margin requirement comfortably exceeds the portfolio's 5 day, 99.7% VAR (\$209M).

Portfolio Overview	USO
Long Market Value	\$2,238,807,232
Short Market Value	-
Net Market Value	\$2,238,807,232
PB Equity	\$425,185,310
Margin Requirement	\$342,999,697
Debit Balance	\$1,813,621,922
Leverage	5.27X

#### **Top 10 Positions:**

TOP TO	Coldons.			
TKR	ISSUER	LMV	% OF LMV	TYPE
BABA	ALIBABA GROUP HOLDING	264,977,286	11.8%	ADR
BIDU	BAIDU INC	223,741,381	9.99%	ADR
AMZN	AMAZON.COM INC	210,517,292	9.40%	CMN STOCK
NFLX	NETFLIX INC	209,845,669	9.37%	CMN STOCK
MSFT	MICROSOFT CORP	203,390,220	9.08%	CMN STOCK
AAPL	APPLE INC	191,857,607	8.56%	CMN STOCK

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WELLS SECURITIES	Wholesale Counterparty Credit Risk Credit Review – Hedge Funds Incremental Request
Investment Manager	Archegos Capital Management, LLC
Fund(s) Name	Archegos Fund, LP

GOOGL	ALPHABET INC-CL A	185,900,798	8.30%	CMN STOCK
GOOG	ALPHABET INC-CL C	183,167,182	8.18%	CMN STOCK
FB	FACEBOOK INC-A	165,816,016	7.40%	CMN STOCK
FDC	FIRST DATA CORP- CLASS A	124,026,118	5.53%	CMN STOCK
TOTAL	-	1,963,239,568	87.69%	-

<sup>-</sup> As of October 3<sup>ra</sup>, 2018

## **INITIAL REVIEW - AUGUST 2018**

Risk Manager	Risk Officer	Analyst	Report Date
Ben Maisel	Alex Klag	-	August 2018

WCIS ID	Counterparty / Fund Name	Fund Type	BQR	CQR	Credit Tier	Legal Documentation
244162348	Archegos Fund LP	HF	52	1	2	PBCA

## PURPOSE & REQUEST / RELATIONSHIP

Purpose – This is the initial credit review for Archegos Capital Management, LLC ('the Firm' or 'Archegos'), a New York based investment management company responsible for managing the assets of Bill Hwang and his family. Bill holds materially all of his net worth within Archegos Fund LP, which at the end of June, totaled \$4.7 Billion in assets. The Firm has been a going concern since 2013 and has 40 employees.

Prior to re-organizing as a family office in 2013, Mr. Hwang was the Founder and CIO of Tiger Asia Management, LLC, from 2001 to 2012. Tiger Asia was a long/short equity hedge fund that focused on Asia based issuers.

In 2012, Tiger Asia Management, LLC and Bill Hwang were charged by the SEC with insider trading. The charges would ultimately be settled, and terms of the settlement included a \$44M fine and a 5 year ban on managing external capital. Notably, Bill did not have to admit to, nor deny the charges. Separately, Bill was banned from trading in Hong Kong for 4 years. Following the legal process, Tiger Asia returned all capital to investors and re-organized as a family office (Archegos). The 5 year ban expired in January 2018; however, Management at Archegos confirmed that there are no near-term plans to open up to external investors. The 4 year ban expires in October 2018. (See: Corporate Structure for more details on the background of the organization).

Following the events in 2012, Archegos underwent a number of changes to improve the Firm's culture and procedures. A 30 year corporate veteran, Andy Mills, was hired in 2014 to ensure that Archegos developed and maintained best in class processes and procedures as it relates to regulatory compliance. The Firm is exempt from SEC registration (due to its family office status); however, it is run in all material respects to the same standards. The Firm uses reputable service providers and also continues to retain outside administrative and auditing services.

**Relationship** – Archegos is poised to be a new PB client on WFS' Self-Clearing Platform (Portfolio Margin). The relationship will be covered by Pat Travers and Mike Collins in PB Sales. There is also potential for equity swap business as the relationship develops.

Archegos has maintained a long-term custodial relationship with Wells Fargo's IRT team. At the end of Q1, Archegos held \$45M in cash and securities at the bank. Denise Zapzalka is the relationship manager on the IRT side. Lastly, Judith Barry has assumed coverage of Archegos on the GICG side and is supportive of the PB opportunity.

Ben Maisel and Alex Klag conducted a due diligence meeting at the Archegos offices on May 15, 2018. Accounting Manager, Scott Becker and CFO, Patrick Halligan were in attendance from the Archegos side. Scott and Patrick are WCCR's main credit contacts.

A follow-up meeting was also conducted on July 17<sup>th</sup>, 2018. Founder, Bill Hwang, Chairman and President, Andy Mills and Head Trader, William Tomita were in attendance from the Archegos side. Ben Maisel, Mike Riley, Eamon McCooey, Judith Barry and Patrick Travers were in attendance from Wells Fargo. Notes from both meetings have been included in the below review.

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WELLS SECURITIES	Wholesale Counterparty Credit Risk Credit Review – Hedge Funds Incremental Request
Investment Manager	Archegos Capital Management, LLC
Fund(s) Name	Archegos Fund, LP

## **RECOMMENDATION & LIMITS**

WCCR recommends the Archegos Fund LP for Portfolio Margin Leverage on WFS' Self-Clearing PB Platform. In addition, WCCR is supportive of up to \$1.5Bn in portfolio financing (i.e. debits) for the fund. Archegos expects to clear a long-only equity portfolio at WFS, since the manager gains the majority of its short exposure via swap (see: Leverage for more details).

WCCR is comfortable given the below fact pattern:

- Archegos will trade on an overnight PBCA, providing WFS with the ability to recall loans / raise margin at any time
- Archegos has a large, committed capital base of \$4.7Bn; \$1.5Bn in financing is a conservative starting point
- The expected portfolio at WFS includes large and mega cap public equity securities
- The manager takes a fairly long-term view on names they hold, and the investment strategy is backed by fundamental research

Counterparty / Fund Name						NAV as of 6/30/18		
Archegos Fund, LP					\$4,697M			
Limit Type	Legal Entity	Max Tenor	Debit Limit	Current PFE Limit	Proposed PFE Limit	Current Exposure	Limit as % of NAV	
Prime Brokerage	WFSLLC	O/N	\$1,500M	-	\$10.0M	_	0.21%	
Total								
* All figures in millions								

## **GRADES & GRADING RATIONALE**

## **Key Supporting Factors**

- Large & Committed Capital Base Archegos manages \$4.7Bn in capital, all of which is provided by Founder, Bill Hwang and his family. There are no external investors. The Firm is also fairly institutional for a family office in terms of the numbers of employees and their service providers.
- Outstanding Performance Track Record Archegos is annualizing a return of +53% over the last three years; the fund generated a +43% return in 2016, a +37% return in 2017 and a +40% return through June in 2018.
- Straight-Forward & Liquid Investment Strategy Archegos runs a vanilla long/short equity strategy that is based in fundamental research. The fund invests primarily in large and mega cap stocks in the US, Japan and China (via ADRs). Overall fund leverage is moderate.
- Management Expertise Founder and CIO, Bill Hwang, has over 20+ years of experience in the securities industry. He previously worked as an equity analyst at Tiger Management, before spinning off and starting his own hedge fund, Tiger Asia Management, LLC. Archegos has operated as a family office since 2013.

#### **Key Risk Factors**

- Reputational / Previous Regulatory Issues While at Tiger Asia, Founder, Bill Hwang was charged by the SEC for insider trading. The firm, Tiger Asia Management was also charged with one count of wired fraud. All charges were settled. Bill was prohibited from managing external capital for 5 years. Bill did not have to admit nor deny the charges. Bill was also banned from trading in Hong Kong for 4 years. Following the legal process, Tiger Asia returned all capital to investors and re-organized as a family office (Archegos).
  - Mitigant Archegos has made substantial improvements to its compliance procedures and personnel. A 30 year corporate veteran, Andy Mills, was hired in 2014 to ensure that Archegos maintained best in class processes and procedures as it relates to regulatory compliance.
  - <u>Mitigant</u> Archegos has been cleared by the Head of Financial Crimes at WFS and will be subject to enhanced compliance monitoring at WFS.
- Position Concentration / Volatility Archegos tends to hold a concentrated portfolio of 15-20 longs and 10-15 shorts. Position sizes can appreciate to 20-30% of NAV and as a result, month over month performance can be volatile (although historically it has largely been to the upside).
- **Key Man** Bill Hwang remains the firm's sole decision maker and there are no hard risk limits. Given the fundamental investing background, a temporary decline in a holding, will often be viewed as a buying opportunity (as long as the thesis remains intact).

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WELLS SECURITIES	Wholesale Counterparty Credit Risk Credit Review – Hedge Funds Incremental Request
Investment Manager	Archegos Capital Management, LLC
Fund(s) Name	Archegos Fund, LP

Counterparty / Fund Name	Previous BQR	New BQR	CQR	AQR
Archegos Fund LP	-	52	1	2
BOR Rationale				

WCCR recommends a BQR rating of 52 for Archegos Fund LP. Supporting the rating is a large capital base, an outstanding performance track record, and a focus on investing in large and liquid public equity securities. The lack of traditional redemption risk from outside investors is also a credit positive. Constraining the rating is a modest amount of leverage, a penchant for holding a relatively concentrated portfolio and the absence of an independent risk management function.

Also impacting the rating is the Founder, Bill Hwang's previous reputational issues. The Firm has made large strides in improving its compliance culture and procedures since late 2012.

The fund could be subject to a rating **upgrade**, if management enhances its risk management function, if leverage is reduced or if portfolio diversification is increased. The fund could be subject to a rating **downgrade** if performance worsens, if capital is removed from the fund, if leverage is increased or liquidity declines.

Utilizing the Quantitative BQR grid for Hedge Funds generated a summary Quantitative BQR Factor of 51.60 (52).

## CQR Rationale (Secured – Prime Brokerage)

Approved exposures for Prime Brokerage customers are typically assigned a CQR of 1. A CQR of 1 reflects the fact that Prime Brokerage debits are fully collateralized by a first lien on marketable securities, held in Wells Fargo custody. Prime Brokerage margin lending is designed to be fully secured by cash and liquid securities at all times. The margin requirements are calibrated such that the portfolio can withstand extreme market shocks and still hold sufficient collateral to repay the account's liabilities. This conforms with policy WCCR-8720.

## **EXPOSURE & RELATIONSHIP SUMMARY**

Archegos is a new PB client that will be utilizing WFS' Portfolio Margin Self-Clearing Platform. The expectation is that Archegos will clear a relatively concentrated long-only, US equity portfolio (10-20 names). Leverage at WFS will be capped at 6.7x (the PM ceiling); however, due to the portfolio directionality and the potential sector and single name concentration, leverage will likely be in the 3-5x range.

Archegos provided a number of different sample portfolios for WFS' review. The below three are the most likely, given the most recent communication from the client. The average margin requirement on the long-only portfolios that were provided range between 22-40%.

WELLS SECURITIES	Wholesale Counterparty Credit Risk Credit Review – Hedge Funds Incremental Request
Investment Manager	Archegos Capital Management, LLC
Fund(s) Name	Archegos Fund, LP

Risk Overview	1B Long Only	2B Long Only	4B Long Only
Long Market Value	997,711,635	1,970,274,820	4,004,970,834
Short Market Value			
Gross Market Value	997,711,635	1,970,274,820	4,004,970,834
Net Market Value	997,711,635	1,970,274,820	4,004,970,834
PM Requirement	-149,657,809	-599,953,961	-600,782,312
Risk Requirement	-401,415,026	-503,104,959	-917,894,252
Margin Requirement	401,415,026	599,953,961	917,894,252
Max Debit	-596,296,609	-1,370,320,859	-3,087,076,582
Max Leverage	2.49	3.28	4.36
Risk Requirement Details			
EQ Risk	-149,656,745	-340,610,837	-630,476,690
EQ Liq Add on		-66,321,007	-113,651,150
EQ Conc Add on	-172,268,853		-97,328,521
EQ Sector Add On	-79,489,428	-96,173,115	-76,437,891

## CORPORATE STRUCTURE, KEY PRINCIPALS, FIRM BACKGROUND & COMPLIANCE

Corporate Structure – Archegos Capital Management, LLC ('the Firm' or 'Archegos') is a New York based investment management company responsible for managing the assets of Bill Hwang and his family. Prior to re-organizing as a family office in 2013, Mr. Hwang was the Founder and CIO of Tiger Asia Management, LLC (a Tiger Cub and Asia-focused equity hedge fund) from 2001 to 2012.

Today, the Firm retains ~40 employees and oversees \$4.7Bn in assets. Mr. Hwang, remains the Firm's CIO and materially all investments are executed via Archegos Fund, LP, the primary investment vehicle. Mr. Hwang is supported by a research team of 20+ analysts. The Firm does not manage external capital and does not have any near term plans to do so.

## **Key Principals -**

**Sung Kook 'Bill' Hwang, Founder and CEO** – Bill is the founder and Chief Executive Officer at Archegos Capital Management. Bill founded and ran Tiger Asia from 2001 to 2012, before turning the firm into a family office and renaming it Archegos Capital Management in 2013. Bill previously worked as an equity analyst at Tiger Management, as well as an institutional equity sales person at both Peregrine Securities and Hyundai Securities. Bill is also a co-founder of the Grace and Mercy Foundation that serves in the areas of Christianity, art, education, justice, and poverty. Bill received a BA in Economics/Business from the University of California, Los Angeles, and an MBA from Carnegie-Mellon University.

Andy Mills, President and Executive Chairman – Andy is the Executive Chairman and President at Archegos Capital Management, and joined the firm in 2014. He was the former Chief Executive Officer of the Thomson Financial and Professional Publishing unit of The Thomson Corporation, where he was also a member of the Board. Andy is also a Senior Fellow at The King's College in New York City, where he was previously the President and Chairman of the Board of Trustees. Andy received a BA from Oxford University and an MBA from Harvard University.

**Firm Background** – As noted above, prior to re-organizing as a family office in 2013, Bill Hwang was the Founder and CIO of Tiger Asia Management, LLC. In December 2012, the SEC charged Bill Hwang and Head Trader, Raymond Park, with insider trading and in a parallel action, also charged Tiger Asia Management LLC. The SEC also charged the management company with one count of wire fraud.

<u>Details</u> – The SEC alleged that between December 2008 and January 2009, Hwang and his funds committed insider trading by short selling three Chinese bank stocks, two for Bank of China and one for China Construction Bank based on confidential information they received in private placement offerings. Hwang allegedly ordered

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Investment Manager	Archegos Capital Management, LLC
Fund(s) Name	Archegos Fund, LP

Park to make short sales in each stock in the days prior to the private placement. Hwang and his advisory firms then covered the short positions with private placement shares purchased at a significant discount to the stocks' market price. Hwang and his firms illegally profited by \$16.2 million by using the discounted private placement shares they received to cover the short sales they had entered into based on inside information about the placements.

The SEC further alleged that on at least four occasions from November 2008 to February 2009, Hwang and his firms, with Park's assistance, attempted to manipulate the month-end closing prices of Chinese bank stocks publicly listed on the Hong Kong Stock Exchange. These stocks were among the largest short position holdings in the hedge funds' portfolios. This enabled Hwang and Tiger Asia Management to illicitly collect higher management fees from investors.

Collectively, Bill Hwang and Tiger Asia Management agreed to pay \$44M to settle the charges alleged by the SEC. Mr. Hwang did not have to admit or deny to the personal charges. Tiger Asia Management LLC plead guilty to one count of wire fraud. Also culminating from these events, Mr. Hwang was banned from managing external capital for 5 years, commencing in January 2013. The 5 year ban expired in January 2018; however, the Firm is not looking to raise outside capital. Mr. Park was banned from managing external capital for 3 years. Mr. Park subsequently retired and is not involved in the operations of Archegos.

In October 2014, a Hong Kong Tribunal (the Market Misconduct Tribunal) banned Tiger Asia Management LLC and founder, Bill Hwang, from trading in Hong Kong for 4 years (experiencing October 2018). Archegos has communicated that they will look to trade in Hong Kong, once the ban expires.

**Compliance** – Archegos has instituted a number of changes since 2010 to improve the Firm's culture and history of compliance. Leading these efforts is the Executive Chairman and President, Andy Mills, who joined the Firm in 2014. Andy has over 30 years of experience in corporate, civic and academic institutions. Andy is responsible for all day to day and strategic non-portfolio related decisions. In effect, Andy and Bill report to each other. The Firm's Chief Compliance Officer, Michael Satine also has over 30 years of experience at Goldman Sachs.

Post 2012, Archegos implemented a best in class compliance manual, which was developed in cooperation with a top tier New York law firm (Ropes & Gray). All employees are required to review the manual and acknowledge their understanding of, and agreement with, its contents on an annual basis.

Formal compliance trainings are held by a large outside law firm every 6 months. These training cover MNPI and trading restrictions. Additionally, the trading staff undergoes a specific compliance training on insider trading and market manipulation. In conjunction with these law firms, Archegos developed detailed operational procedures to ensure compliance with all regulatory rulings.

The ACA Compliance Group has also been retained since 2012. They have conducted a complete review of the Firm's procedures. The Archegos finance department completes an annual audit to ensure compliance procedures are being followed. Some of the more notable procedures are below.

All trades are reviewed daily by the CCO and the CCO is responsible for ensuring that appropriate analysis has been performed on each security in the portfolio. Any issues are raised to the Execute Chairman and President.

The accounting department remains independent of the investment team and in conjunction with the Administrator, is responsible for daily valuations of the portfolio.

The Firm maintains an actively monitored restricted list, which prevents the Firm or its employees from trading certain names.

## SUMMARY OF COUNTERPARTY

Counterparty / Fund Name	Inception	Domicile	NAV as of 6/30/18
Archegos Fund, LP	2001/2013	Delaware	\$4,697M

WELLS SECURITIES	Wholesale Counterparty Credit Risk Credit Review – Hedge Funds Incremental Request
Investment Manager	Archegos Capital Management, LLC
Fund(s) Name	Archegos Fund, LP

Fund Structure				
Delaware Limited Pa	rtnership			
<b>Redemption Policy</b>				
Frequency		Daily; This is a family office and has the ability to pull capital on any business day. Countering that point, Founder and CIO, Bill Hwang, has materially all of his capital invested via this vehicle.		
Lock-Up / Early Redemption Fees	N/A			
Subscription	S	Minimum Investment	Management Fee	Incentive Fee
N/A		N/A	N/A	N/A

Note – This is a family office and is not open to external investors.

Service Providers	
Prime Broker(s)	Morgan Stanley, Credit Suisse, Deutsche Bank, Nomura, Jefferies and Wells Fargo (2018)
Administrator	Citco Fund Services
Custodian	Bank of America, Wells Fargo & Morgan Stanley
Auditor	Kaufman Rossin & Co.
Counsel	Ropes and Gray

## **SUMMARY OF CAPITAL BASE**

Archegos is a family office, with all capital provided by the Firm's CIO and Founder, Bill Hwang. The Firm maintains the ability to raise outside capital, but has no plans to do so at this time.

Capital flows will largely be driven by three areas, compensation for employees, tax payments and charitable donations. Mr. Hwang has the large majority of his net worth invested in the fund.

## **INVESTMENT STRATEGY & PORTFOLIO COMPOSITION**

**Investment Strategy** – Archegos implements a concentrated, long-biased equity strategy that focuses on companies based in the US and Asia. Archegos has a long-term investment horizon (3-5 years) and all investments are based in bottom-up fundamental research. The manager tends to focus on names within the Technology, Media and Internet sectors, and also focuses on Financials and Consumer names to a lesser extent. The investment strategy is/was highly influenced and is still reminiscent of Bill's time at Tiger and Tiger Asia.

Bill Hwang remains the CIO and sole decision maker at Archegos. He is supported by Brian Jones (Head of Research) and a 20 person analyst team. Each analyst is responsible for coverage of 20-30 names. Archegos also maintains a relationship with a Korea-based consultant team that provides local coverage of Chinese and Japanese names. The NY staff will rotate coverage for Asia market hours.

The fund's investment universe spans roughly 250 securities and is almost exclusively in Mega and Large cap companies. Bill carries a long pedigree of investing in the Tech sector, especially in the Asia region. The manager tends to stay away from Macro related trades or industries (i.e. Energy). Regionally, 60-70% of exposure is in US names and the remaining 30-40% is in Asia based issuers (Japan and China primarily, with the latter captured via ADRs; there is also a small amount of exposure to Korea based issuers).

**Portfolio Sizing and Turnover** – Archegos tends to hold a concentrated portfolio of equity securities. In total, the core portfolio will include 25-35 positions (15-20 longs and 10-15 shorts). Larger positions will start at around 10% and can get as high as 20-30%. Although longs and shorts are generally independent, Management noted that Bill will typically look to hedge a position (through a short of a similar company or a sector ETF) if it exceeds ~10% of NAV.

Archegos has a long-term investment horizon and can hold core names for 3+ years. The portfolio is also managed to be very tax efficient, which reduces the amount of interim trading. It is not unusual for the manager to go days without trading.

WELLS SECURITIES	Wholesale Counterparty Credit Risk Credit Review – Hedge Funds Incremental Request
Investment Manager	Archegos Capital Management, LLC
Fund(s) Name	Archegos Fund, LP

**Portfolio Composition** – The most recent cut of Archegos' investment portfolio included a heavy bias to large, liquid US and Asian equity securities (which matches the intended investment strategy). In particular, Archegos held many of the FANG + BAT stocks, in large size. The majority of these positions have been held by the fund for several years.

Ticker	Issuer	Shares	Market Value	% of LMV	Sector
AAPL	Apple	8,294,402	1,345,292,791	17%	Retail / Tech
AMZN	Amazon	1,136,404	1,318,308,635	17%	Internet, Media & Telecom
BIDU	Baidu – ADR	3,996,701	935,779,786	12%	Internet, Media & Telecom
GOOG	Alphabet	859,286	901,911,020	12%	Internet, Media & Telecom
FB	Facebook	3,826,093	671,815,800	9%	Internet, Media & Telecom
NFLX	Netflix	3,381,688	645,136,017	8%	Internet, Media & Telecom
BABA	Alibaba – ADR	2,591,779	446,900,453	6%	Internet, Media & Telecom
FDC	First Data Corporation	26,697,469	439,670,613	6%	Financial

TOTAL 6,704,815,115 87%

Note - Numbers as of 12/31/2017

## LIQUIDITY & LEVERAGE

Liquidity – Liquidity of the portfolio is enhanced by manager's emphasis on investing in public, listed equity securities. Archegos tends to stay in large and mega cap stocks, and does not typically hold more than 5% of the outstanding issuance (remaining below the 13D requirements). The portfolio includes some exposure to names outside of the US (notably in Japan, China and Korea); however, in Tiger Asia, Bill previously managed a \$10Bn equity portfolio (\$25Bn of gross assets in Asia alone) and did not have any capacity issues. Within Archegos, equity exposure to Asia based companies will comprise a smaller percentage of AUM (30-40%).

At present, between 30-40% of NAV is held as excess cash, with a small buffer (~10%) held at counterparties, and the remaining 20-30% held in Money Market Products at a custodian. Cash is a function of the fund's leverage and margin requirements, which Archegos' estimated at 20-30%.

WCCR also notes that Archegos' liquidity profile is preferential to that of a traditional hedge fund, as the manager is not subject to outside redemption requests.

**Leverage** – Archegos typically holds a long-biased equity portfolio, with net exposure in the 50-100% range. Gross exposure generally remains between 200-300%, but exposure can reach as high as 350%.

Archegos sources leverage from its prime brokerage and equity swap relationships. On the long side, leverage is primarily sourced from their prime brokerage relationships. On the short side, leverage is sourced almost exclusively from their equity swaps counterparties. Some of their providers have the ability to net the two; however, others see either a long only portfolio in PB, a short only portfolio on swap or some combination of the two.

The Firm structures its longs and shorts in this manner to achieve the highest level of tax efficiency. Short selling via cash equities is known to be highly inefficient (from a tax perspective) as realized capital gains are generally taxed at the higher short-term capital gains rate, regardless of the holding period. Conversely, shorts done on swap are taxed at different rates, depending on if the associated payment is periodic (done at intervals, one year or less), non-periodic (bullet swaps, can be longer than 1 year) or termination.

Note – the fund also utilizes swaps on the long side for access purposes.

## **RISK MANAGEMENT & VALUATION PROCESS**

**Risk Management** – Archegos does not maintain an independent risk function. CIO, Bill Hwang is responsible for all investment decisions and the large majority of risk analysis is conducted during the research phase. Mr. Hwang maintains a considerable amount of risk tolerance and risk decisions are almost always dependent on the investment thesis. If one of their positions experiences negative pricing pressure, the team will typically see this as a buying opportunity (assuming the thesis remains intact).

WELLS SECURITIES	Wholesale Counterparty Credit Risk Credit Review – Hedge Funds Incremental Request
Investment Manager	Archegos Capital Management, LLC
Fund(s) Name	Archegos Fund, LP

**Valuation** – Pricing of the portfolio is fairly straight forward as the fund primarily invests in publicly listed equity securities. To a lesser extent, the portfolio will also include equity trades done on swap. The accounting department remains independent of the investment team and in conjunction with the Administrator (Citco Fund Services), is responsible for daily valuation of the portfolio.

According to the most recent financial statements, 99% of the fund's assets were categorized as Level 1 securities. 99% of the fund's liabilities were categorized as Level 2 securities.

## **INVESTMENT PERFORMANCE**

Archegos maintains an outstanding performance track record, since the fund's inception in 2013. This includes positive +25% returns in each of the last four years, a positive 37% return in 2017 and a positive 40% return through June of 2018. We would also note, that these returns are *understated*, since Archegos chooses to report numbers that are 'net' of a 1.5% management fee and a 20% performance fee (when in practice the fund does not actually charge fees, given its family office status).

Over the trailing 36 month period, the fund has clearly outperformed the benchmark index on both an absolute basis (53% vs 3%) and risk adjusted basis (1.70 Sharpe vs 0.56). While returns have been excellent, they do come with higher than average volatility for the long/short equity hedge fund space at 30.88%.

In 2018, Fund performance has largely been driven by one of Archegos' top positions, Netflix (NFLX). The stock is up 96% YTD through July. Positions in other FANG stocks have also helped to boost returns.

Counterparty / Fund Name	Annualized Return	Standard Deviation	Sharpe Ratio	Max Monthly Return	Min Monthly Return
Archegos Fund, LP	53.27%	30.88%	1.70	31.30%	-11.10%
Credit Suisse Long/Short Equity Index	3.31%	4.59%	0.56	3.11%	-2.78%

Note – Performance metrics are from the past three years (July 2015 – June 2018). Performance is 'Net' of fees, although in practice, no fees are charged by the fund.

2014 Return	2015 Return	2016 Return	2017 Return	YTD 2018 Return
11.39%	28.29%	43.82%	37.92%	40.68%
5.55%	3.55%	-3.43%	13.40%	0.65%
Principle Editorian	<b>Return</b> 11.39%	Return         Return           11.39%         28.29%	Return         Return         Return           11.39%         28.29%         43.82%	Return         Return         Return         Return           11.39%         28.29%         43.82%         37.92%

**Due Diligence** – Ben Maisel and Alex Klag conducted a due diligence meeting at the Archegos offices on May 15, 2018. Accounting Manager, Scott Becker and CFO, Patrick Halligan were in attendance from the Archegos side. Scott and Patrick are WCCR's main credit contacts.

A follow-up meeting was also conducted on July 17<sup>th</sup>, 2018. Founder, Bill Hwang, Chairman and President, Andy Mills and Head Trader, William Tomita were in attendance from the Archegos side. Ben Maisel, Mike Riley, Eamon McCooey, Judith Barry and Patrick Travers were in attendance from Wells Fargo.

**Transparency / Resources** – In terms of financial reporting, Archegos provided historical NAV/Performance, since inception in 2013 and five years of audited financial statements (2017, 2016, 2015, 2014 & 2013). Archegos noted that the financial statements can be finalized later in the cycle (April-July), given that the manager does not have any external investors. Monthly NAV/performance are independently verified by the fund's administrator (Citco)

Archegos does not produce any marketing materials or risk reports, but the Firm does maintain a website with bios on key personnel.

## **APPENDIX I - FINRA RULE 4210**

WELLS SECURITIES	Wholesale Counterparty Credit Risk Credit Review – Hedge Funds Incremental Request
Investment Manager	Archegos Capital Management, LLC
Fund(s) Name	Archegos Fund, LP

FINRA Rule 4210 prescribes requirements governing the extension of credit by firms that offer margin accounts to customers around the amount of collateral customers are expected to maintain in such accounts, including both strategy-based margin accounts and portfolio margin accounts across equities, fixed income, options, warrants and futures transactions. As of this analysis, the requirement is for compliance with FINRA Rule 4210 for TBA and Reverse Repo trades out of the broker-dealer (WFSLLC) only. However, WCCR determined that a best practice would be to comply with the rule for all reverse repo regardless of the legal entity it touches (WFBNA and WFSLLC).

Not Ap	plicable		
As TBA and/or Reverse Repo limits are not being requested at this time, exemption status is not required.			
Counterparty / Fund Name	Exempt or Non-Exempt		
Archegos Fund, LP	Not Applicable		

## **APPENDIX II – POLICY EXCEPTIONS**

Per WFC – CP 8600 (Counterparty Credit Risk Management Policy), WCCR is to document and report any policy exceptions that are identified during the review process. This is to include any of the Restricted Activities (RAs), Credit Policy Exceptions (CPs) and Credit Management Conditions (CMCs) outlined in WFC – CML 2300 Exhibit A.

Policy Exceptions	
None	

**Note** – WCCR confirmed with the WFS Head of Financial Crimes (Joe Scalvo) that Archegos and Bill Hwang's past regulatory problems would not violate any of the restricted activities outlined in corporate policy WFC – CML 2300.

## **APPENDIX III - SUMMARY OF CREDIT TERMS**

Wells Fargo has an executed PBCA with Archegos. This is an <u>overnight agreement</u> and WFS retains the ability to recall loans and/or raise margin at any time.

PBCA - Credit Terms	
Cross Default	Cross Acceleration
Margin Timing	10AM / 6PM / 12PM
Margin Cure Periods	If the customer provides satisfactory evidence of ops/admin error in 4 BH from notice of missed/failed call, the customer has right to deliver later of close of Fedwire in such BD that 4 BH grace expires or 4 BH of customer providing evidence of admin/ops error.
NAV Covenants	N/A – Overnight Agreement
Other ATEs	N/A – Overnight Agreement
Financial Reporting	150BDs for Audited Financial Statements
	15BDs for Monthly NAV & Performance
	2BDs for Interim NAV Estimates